> Denotes revised material in this JPM

JOB PERFORMANCE MEASURE

TASK CODE: CFO-141

TASK: Analyze an Air sample for Alpha and Beta Activity

NAME:_____ **>BADGE**:_____

>REFERENCES: Only references for knowledge items are listed here. The trainee is expected to identify the correct references for practical items.

1. WP 12-HP3500, Airborne Radioactivity
2. 10CFR835, Occupational Radiation Protection

TERMINAL OBJECTIVE:

Given an air sample, analyze the air sample for alpha and beta activity per WP 12-HP3500.

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Improper survey results

HAZARDS (PERSONNEL/EQUIPMENT STATUS):

Internal deposition of radioactive material

PRE-REQUISITE TRAINING/ TASK COMPLETION:

1. CL 1.00 Series
2. CL 2.19, Counting Room Equipment
3. CFO-111, Operate a Beta Laboratory Counter
4. CFO-129, Operate an Alpha Laboratory Counter

TOOLS/EQUIPMENT (MATERIALS REQUIRED):

1. Appropriate Instrumentation
2. Calculator
3. Air Sample Data Sheet

Instructions to Trainee: You shall acquire the necessary references and equipment, and complete all required documentation. Knowledge requirements shall be completed with 80% or greater accuracy. Critical step performance shall be completed with 100% accuracy.

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Instructions to JPM Evaluator: The trainee is to perform the terminal objective, without assistance, on the job site. Provide clarification of requirements if requested by the trainee. You are encouraged to ask relevant questions to verify trainee understanding. If the trainee fails this JPM, clearly document the reason for failure and forward to the trainee's manager. Successful completion of this JPM shall be recorded on the trainee's qualification card.
>On performance items, if there is more than one means available to accomplish the step, circle the method used. Refer to the RCT-01 Qualification Standard for preference of use.

KNOWLEDGE REQUIREMENTS:

Reference	Knowledge Requirement	Pass/Fail
1	Define the term MDA.	
1	Define the term LLD.	
1	State the acceptance criteria for air sample results.	
2	Define the term Derived Air Concentration.	
2	State where the DAC values can be found for a given isotope	
1	State the basis for the DAC values used at WIPP.	
1	Describe how the DAC value is used in the field assessment.	

PERFORMANCE REQUIREMENTS:

>Method	Performance Requirement	Pass/Fail
P	Calculate an MDA. #	
P	Calculate a LLD. #	
P	Determine the net count of an air sample. #	
P	Determine the activity in uCi/ml. #	
>P, S	Transfer air sample to the Radiochemistry lab for analysis	
P	Calculate a DAC ratio. #	
P	Perform appropriate actions if air sample is above specified limits. #	
P	Complete the Air Sample Data Sheet. #	

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# indicates a critical step

FINAL EVALUATION: PASS FAIL

COMMENTS:

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EVALUATOR SIGNATURE: _____ **DATE**:_____

TRAINEE SIGNATURE: _____ **DATE**:_____

MANAGER SIGNATURE: _____ **DATE**:_____